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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/748,490	12/26/2000	Wataru Hisada	52433/622	2859

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KENYON & KENYON  
ONE BROADWAY  
NEW YORK, NY 10004

EXAMINER

TALBOT, BRIAN K

ART UNIT	PAPER NUMBER
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1762

DATE MAILED: 11/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/748,490

Applicant(s)

HISADA ET AL.

Examiner

Brian K Talbot

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 May 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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1. The preamendment filed 12/26/00, has been considered and entered. Claims 1-11 remain in the application.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

The term "hard" in claim 8 is a relative term which renders the claim indefinite. The term "hard" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

The terms "high" and "low" in claims 1-8 are relative terms which render the claims indefinite. The terms "high" and "low" are not defined by the claims, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1,2 and 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted state of the art (specification, pgs. 1-2) in combination with Omori et al. (6,015,586).

Applicant's admitted state of the art (specification, pgs. 1-2) teaches coating carbon, stainless steel and aluminum separators for fuel cells with a precious metal.

Applicant's admitted state of the art (specification, pgs. 1-2) fails to teach coating the precious metal by "impinging a core particle having a coating of a precious metal" to the separator which upon impacting would result in transfer of the precious metal".

Omori et al. (6,015,586) teaches cold dry plating process for forming a zinc coating on a substrate by impinging iron particles having encapsulated thereon a zinc alloy coating. The particle size is 40-2000 microns. The Vickers hardness is about 780 HV. The speed of the particles is 30-100 m/s.

With regards to the "variable" of the process, speed of particles, size of particles, specific gravity of particles, etc., it is the Examiner's position that these are all "result effective variable" which are "optimized" by a skilled practitioner in the art depending upon the desired end product. It has been well settled that the "optimization" of well know "result effective variables" is deemed as an obvious modification of the art absent a showing of unexpected results.

Claims 3,5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted state of the art (specification, pgs. 1-2) in combination with Omori et al. (6,015,586) further combination with EP-911425 A1.

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Features described above are incorporated here.

Applicant's admitted state of the art (specification, pgs. 1-2) in combination with Omori et al. (6,015,586) fails to teach the various claims "projection techniques", i.e. air, water and inert gas.

EP-911425 A1 teaches a coating technique whereby particles are impinged to a substrate by cold gas spraying with a variety of mediums including, air, inert gases and water vapor.

Therefore, it would have been obvious at the time the invention was made to have modified Applicant's admitted state of the art (specification, pgs. 1-2) in combination with Omori et al. (6,015,586) by substituting any one of the "carriers" detailed by EP-911425 A1 with the expectation of achieving similar results.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted state of the art (specification, pgs. 1-2) in combination with Omori et al. (6,015,586) further combination with EP-911425 A1.

Features described above are incorporated here.

Applicant's admitted state of the art (specification, pgs. 1-2) in combination with Omori et al. (6,015,586) fails to teach the "projection technique of an impeller".

Singer et al. (5,516,586) or Babecki et al.(3,754,976) both teach utilizing a "wheel" to propel the particles against a substrate to impart a coating thereon.

Therefore, it would have been obvious at the time the invention was made to have modified Applicant's admitted state of the art (specification, pgs. 1-2) in combination with

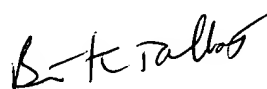
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Omori et al. (6,015,586) by substituting an impeller as evidenced by either Singer et al. (5,516,586) or Babecki et al. (3,754,976) with the expectation of achieving similar results.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian K Talbot whose telephone number is (703) 305-3775. The examiner can normally be reached on Monday-Friday 6AM-3PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive P Beck can be reached on (703) 308-2333. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3775.



Brian K Talbot  
Primary Examiner  
Art Unit 1762

BKT  
October 31, 2002